

Independent claim 169 recites a spinal fusion implant having a body having a substantially cylindrical configuration, at least one truncated side, and a thread for engaging said implant to the adjacent vertebral bodies of the spine, "the locus of said thread forming a substantially cylindrical configuration." The locus of threads 18 and 19 of the Zdeblick fusion device do not form a substantially cylindrical configuration. (See, e.g., Zdeblick, Fig. 3).

Independent claim 195 recites a spinal fusion implant having a thread with "a thread height measured from said body, said thread height being variable along more than one turn of said thread about the mid-longitudinal axis of said body." Zdeblick does not teach or suggest an implant with a thread height as recited in independent claim 195 of Applicant's claimed invention.

Applicant submits that Zdeblick also fails to teach or suggest the subject matter of many of Applicant's dependent claims. For example, dependent claim 213 recites the thread being "uninterrupted." Zdeblick discloses that "conical body 11 defines a series of interrupted external threads 18." (Zdeblick, col. 5, lines 63-64; Fig. 2).

Dependent claim 215 recites the body having "a substantially cylindrical configuration." Zdeblick discloses "an elongated body, tapered along substantially its entire length." (Zdeblick, col. 3, lines 36-37). Dependent claim 216 recites a second thread having a pitch "different than the pitch of said thread." Zdeblick does not teach a second thread. (See, e.g., Zdeblick, Fig. 2). Applicant submits that the Examiner's rejection of claims 154-166, 168-195, 197-201, and 203-218 under 35 U.S.C. § 102(e) as being anticipated by Zdeblick has been overcome.

Applicant notes that the Examiner maintained the rejection under 35 U.S.C. § 102(e) in view of Zdeblick without addressing Applicant's remarks set forth in Applicant's Reply dated January 27, 2006. Applicant respectfully requests the Examiner to either withdraw the rejection under 35 U.S.C. § 102(e) in view of Zdeblick, or address Applicant's remarks set forth in the January 2006 Reply.

The Examiner rejected claim 196 under 35 U.S.C. § 103(a) as being unpatentable over Zdeblick in view of U.S. Patent No. 5,571,189 to Kuslich ("Kuslich"). Applicant respectfully traverses the Examiner's rejection for at least the reasons stated below.

A. Zdeblick and Kuslich teach away from each other.

Applicant submits that the proposed combination of Zdeblick with Kuslich is untenable because Zdeblick and Kuslich teach away from each other. (See MPEP § 2145(X)(D), "References Cannot Be Combined Where Reference Teaches Away from Their Combination," page 2100-132, col. 1 (May 2004).

Dependent claim 196 recites the implant being "at least in part bioresorbable." Zdeblick teaches that devices of the prior art "are not structurally strong enough to support the heavy loads and bending moments applied at the most frequently fused vertebral levels, namely those in the lower lumbar spine." (Zdeblick, col. 2, lines 42-45). Accordingly, Zdeblick teaches toward rigid fusion implants that are structurally strong enough to support heavy loads.

Kuslich teaches an implant made of fabric that is "flexible enough to allow it to be collapsed." (Kuslich, col. 7, lines 35-40). Kuslich teaches that rigid fusion implants are disadvantageous because they "require the placement of devices from both sides of the spine and the installation of a fairly large implant that will not fit through small portals." (Kuslich, col. 3, lines 17-28). Accordingly, Kuslich teaches away from rigid fusion implants.

Moreover, Zdeblick teaches that his implant "prevents early degradation which can inhibit bone regeneration," and that "a non-resorbable implant is also beneficial where complete bone ingrowth may not be achieved." (Zdeblick, col. 9, lines 8-14). Thus, Zdeblick teaches away from the implant being made from a bioresorbable material. Thus, Applicant submits that the proposed combination of Zdeblick with Kuslich is unsustainable and that the rejection must be withdrawn because the disclosures of Zdeblick and Kuslich teach away from one another.

B. Modifying the implant of Zdeblick according to the teachings of Kuslich would render the Zdeblick implant unsatisfactory for intended purpose.

Modifying the Zdeblick implant to have a flexible bioresorbable fabric would likely render the Zdeblick implant inoperable for the intended purpose of "maintaining or restoring the normal spinal anatomy of the instrumented segments." (Zdeblick, col. 3, lines 26-28). (See MPEP § 2143.01, "The Proposed Modification Cannot Render the Prior Art Unsatisfactory For its Intended Purpose," page 2100-129, col. 2 (May 2004)). An important feature of the Zdeblick implant is restoration of the normal lordotic or kyphotic curvature of the spine. (See Zdeblick, col. 2, lines 63-67). Modifying the Zdeblick implant to have a flexible bioresorbable fabric would inhibit the ability of the implant of Zdeblick to restore normal lordosis or kyphosis of the spine. Applicant submits that the Examiner's rejection of claim 196 under 35 U.S.C. § 103(a) as being unpatentable over Zdeblick in view of Kuslich has been overcome.

The Examiner rejected claim 202 under 35 U.S.C. § 103(a) as being unpatentable over Zdeblick in view of U.S. Patent No. 5,906,616 to Pavlov ("Pavlov"). Applicant submits that the rejection over claim 202 is rendered moot at least because it depends from an allowable independent claim, or claims dependent therefrom.

Applicant submits that independent claims 154, 169 and 195 are patentable and that dependent claims 155-168, 170-194, 196-218 dependent from independent claim 154, 169 and 195 or claims dependent therefrom, are patentable at least due to their dependency from an allowable independent claim.

In view of the foregoing remarks, it is respectfully submitted that the claims are patentable. Therefore, it is requested that the Examiner reconsider the outstanding rejections in view of the preceding comments. Issuance of a timely Notice of Allowance of the claims is earnestly solicited.

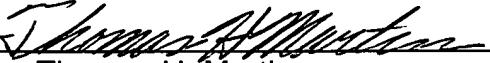
To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this reply, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including

any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 50-3726.

Respectfully submitted,

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